

Effectiveness of Cognitive-Behavior Group Therapy, Psycho-education Family, and drug Therapy in Reducing and Preventing Recurrence of Symptoms in Patients with Major Depressive Disorder

Kamal Solati*

¹Medical Plants Research Center, Cellular and Molecular Research Center, Shahrekord University of Medical Sciences, Shahrekord, Iran

*Corresponding author: E-Mail: kamal_solati@yahoo.com, Tel: +98 381 2220016, Fax: +98 381 3349506
ABSREACT

Depression constitutes one of the most common mental disorders, and medical and psychological therapies are the major therapeutic options for it. The aim of the present study is to examine the efficacy of group cognitive-behavioral therapy, psycho-educational family and medical therapy in reducing and preventing the recurrence of symptoms in patients with major depressive disorder (MDD). This is clinical trial on 60 women with major depressive disorder. Our findings indicate significantly difference between depression scores of the two experiment groups and the control group after intervention. On follow-up, however, only the second experiment group (family education) indicated a significant difference from the control group and the other groups were not significantly different.

KEY WORDS: Drug therapy, major depression, group cognitive-behavioral therapy, psycho-educational family, Iran.

1. INTRODUCTION

Depression is a common mental illness and is one of the major causes of disability worldwide (Organization, 2015). The World Health Organization has estimated that about 350 million people of all ages suffer from this disease, most of whom are women, who make up about 80 percent of morbid cases (Organization, 2015; Stegenga, 2012). The risk of relapse in depressive disorder is a major problem in this disease and need the proper interventions (Preventing Recurrent Depression, 2007).

Various approaches exist to treat major depressive disorder (MDD), and the psychiatric approach considers medication as the first line of therapy Diagnostic and statistical manual of mental disorders DSM-5 (American Psychiatric Association, 2013). But instead of healing depression, popular antidepressants may induce a biological susceptibility making people more presumably to become depressed in the future (Kirsch, 2014). Nevertheless, other approaches, including cognitive-behavioral therapy, have also attracted the attention of clinicians (Berger, 2015; McMahon, 2016). Group cognitive-behavioral therapy is probably helpful in mental health of patients with depression, but few studies have demonstrated its efficacy (Cramer, 2011). Cognitive-behavioral therapy is a strategy for patients failing to respond to pharmacotherapy in psychiatric care provider (Nakagawa, 2014). Although the efficacy of medical therapy over cognitive-behavioral therapy is often mentioned in an exaggerated fashion, little research has been conducted to establish superiority for medical therapy over cognitive-behavioral therapy (Lam, 2013).

Disruption of social relationships domains, can threaten mental health and provide context of depression emergence (Barger, 2014). Among social factors, family relationships is a risk factor for depression that education in family members can be preventive factor for susceptible to depression (Chen, 2013). During the recent years, psychological therapies, particularly mental-social intervention, are gaining popularity (Weightman, 2014). One such intervention is the “mental family education” and systemic family therapy (Taylor, 2015; Kooistra, 2014). This method is cost effective procedure in the relapse prevention of depression (Shimodera, 2012) and improve quality of life in MDD (Sharif, 2012). Some studies indicate that mental family education results in a significant decrease in “feeling pressure” or “family burden” following the intervention and one year after it in patients with mood disorders (Bernhard, 2006). Furthermore, Falloon reported that mental education to caregivers improves social function of patients with mental disorders (Falloon, 2003). Although family interventions for mood disorders in community settings yet are discussed (Miklowitz, 2012).

Considering the controversial findings of previous studies, as well as the importance of cultural variables, the three therapeutic options must necessarily be compared. For this purpose, the present study was designed to evaluate the effectiveness of cognitive-behavioral therapy, mental family education, and medical therapy in reducing and preventing symptoms recurrence of symptoms in patients with MDD.

2. MATERIALS AND METHODS

This is a clinical trial using pre-test, post-test with a control group. The study population consisted of all female patients with MDD admitted to a psychiatric hospital in Shahrekord, a city in western Iran. 60 patients were randomly selected by convenience sampling and assigned to two experiment groups and control group. All three groups received standard medical therapy. The first experiment group underwent cognitive-behavioral therapy for eight sessions, and families of patients in the second experiment group underwent psycho-educational family for

eight sessions. After the intervention, the patients' symptoms were followed up for a period of 6 months. Data were collected using Beck II depression test which was administered to patients before, following and 6 months after the last intervention. Beck II is among the commonly used depression tests with high validity and reliability (Scogin, 1988; Beck, 1988). Data were analyzed by analysis of covariance with SPSS version 18.

3. RESULTS

Table 1 summarizes the descriptive characteristics including mean and standard deviation of depression scores for the three stages of the study.

Table.1. Mean and standard deviation of depression scale scores for the three groups and the three stages of the study

	Group 1* (n=20)			Group 2** (n=20)			Group 3*** (n=20)		
	Pre-test	Post-test	Follow-up	Pre-test	Post-test	Follow-up	Pre-test	Post-test	Follow-up
Depression Score	41.45 (3.83)	32.73 (2.95)	39.58 (2.76)	43.3 (4.86)	31.42 (3.18)	38.27 (3.1)	42.65 (4.86)	37.09 (2.26)	40.84 (3.55)

* Group cognitive-behavioral therapy + medical therapy

** psycho-educational family + group cognitive-behavioral therapy + medical therapy

*** Medical therapy

As Table 1 depicts, the mean depression scores for the experiment groups decreased compared to the control group. The results indicated a significant difference in depression scores of the three groups after therapy and during follow-up. Table 2 compares the mean depression scores of the three groups after therapy in pairs.

Table.2. Pair wise comparisons the difference in mean depression scores of the groups after therapy

Groups		Means Difference	Std. Error	P Value
1	2	1.316	0.918	0.157
	3	-4.35	0.913	0.000
2	1	-1.316	0.918	0.157
	3	-5.66	0.910	0.000
3	1	4.353	0.913	0.000
	2	5.66	0.910	0.000

As Table 2 depicts, there is a significant difference between the two experiment groups and the control group after therapy, indicating that group cognitive-behavioral therapy and psycho-educational family have been efficient in reducing symptoms of depression.

Table.3. Pair wise comparisons the difference in mean depression scores of the groups on follow-up

Groups		Means Difference	Std. Error	P Value
1	2	1.311	0.798	0.106
	3	-1.254	0.794	0.120
2	1	-1.311	0.798	0.106
	3	-2.565	0.791	0.002
3	1	-1.254	0.794	0.120
	2	-2.565	0.791	0.002

As Table 3 depicts, there is a significant difference in depression scores of the psycho-educational family and medical therapy groups; however, the difference is not significant in other cases. This finding indicates that psycho-educational family has been more efficient in preventing the recurrence of depression symptoms compared to other groups.

DISCUSSION

The findings of the present study reveal that group cognitive-behavioral therapy and psycho-educational family alongside standard medical therapy are effective in reducing depression symptoms. This is consistent with findings of Dingle (2010), and Luciano (2012) studies. Tursi (2013) show psychoeducation is a psychosocial therapy that has been proven as an adjunct to pharmacological therapy and can be reduction of the psychosocial burden for the family. Another study showed that psychoeducation was an independent therapeutic program within the framework of a cognitive-behavioral approach that can be used for patients and their families who may suffer from a schizophrenic disorder Bauml (2006). Shimazu, study showed family psychoeducation was more effective in preventing of relapse in intervention group (with major depression) than in the control group (Shimazu, 2011). Other psychoeducation intervention showed that family psychoeducation for family members of patients with one year follow-up, could be a new approach for rehabilitation patients with MDD (Katsuki, 2014). However, the study also reported that family psycho-education combined with pharmacotherapy is more efficacious

compared to the use of these methods alone. This combination causes faster recovery, decrease in severity of depression and progress in subjective wellbeing and improvement social functioning (Kumar, 2015).

Other studies have suggested no difference in treatment efficacy between cognitive behavioral therapy and the use of second generation antidepressants (Amick, 2015). Some studies report a positive effect for cognitive-behavioral therapy in relieving depression symptoms (Kooistra, 2014). Other studies have demonstrated the efficacy of combined medical and cognitive-behavioral therapy in improving symptoms of depression (Davey, 2014). In addition, some studies reported lack of effect of successful for cognitive-behavioral therapy in treating depression and concluded that his therapy requires further investigation. Cuijpers, in a Meta-analysis study demonstrated that psychotherapy was significantly more effective than drug therapy with tricyclic antidepressants (Cuijpers, 2013).

Major depression responds to drug therapy, but 10%–30% of them do not improve in physiological symptoms. Combined treatment need to fight resistant depression and sometimes require multi treatments are needed to prevent the recurrence of depression (Al-Harbi, 2012). Some strategies include psychosocial and cultural therapies, antidepressants, switching of drugs and non-antidepressants augmentation, somatic therapies such as repetitive transcranial magnetic stimulation, electroconvulsive therapy, deep brain stimulation, transcranial direct current stimulation, magnetic seizure therapy, and vagus nerve stimulation (Al-Harbi, 2012). Recently a re-immersion can be seen in investigation and the use of herbal medicines on other psycho-neurological disorders (Saki, 2014; Bahmani, 2016; Rabiei, 2014).

REFERENCES

- Al-Harbi KS, Treatment-resistant depression, therapeutic trends, challenges, and future directions. Patient preference and adherence, 6, 2012, 369-88.
- American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Washington, DC, American Psychiatric Association, 2013.
- Amick HR, Gartlehner G, Gaynes BN, Forneris C, Asher GN, Morgan LC, Comparative benefits and harms of second generation antidepressants and cognitive behavioral therapies in initial treatment of major depressive disorder, systematic review and meta-analysis. BMJ, British Medical Journal, 351, 2015, h6019.
- Bahmani M, Sarrafchi A, Shirzad H, Rafieian-Kopaei M, Autism, Pathophysiology and promising herbal remedies, Curr Pharm Des, 22(3), 2016, 277–285.
- Barger SD, Messerli-Bürgy N, Barth J, Social relationship correlates of major depressive disorder and depressive symptoms in Switzerland, nationally representative cross sectional study, BMC Public Health. 14, 2014, 273.
- Bauml J, Froböse T, Kraemer S, Rentrop M, Pitschel-Walz G, Psychoeducation, A Basic Psychotherapeutic Intervention for Patients With Schizophrenia and Their Families. Schizophrenia Bulletin. 32(1), 2006, S1-S9.
- Beck AT, Steer RA, Carbin MG, Psychometric properties of the Beck Depression Inventory, Twenty-five years of evaluation, Clinical psychology review, 8(1), 1988, 77-100.
- Berger D, Double-Blinding and Bias in Medication and Cognitive-Behavioral Therapy Trials for Major Depressive Disorder. F1000Research, 4, 638, 2015.
- Bernhard B, Schaub A, Kummler P, Dittmann S, Severus E, Seemüller F, Impact of cognitive-psychoeducational interventions in bipolar patients and their relatives. European psychiatry, the journal of the Association of European Psychiatrists, 21(2), 2006, 81-6.
- Burcusa SL, Iacono WG, Risk for Recurrence in Depression, Clinical psychology review, 27(8), 2007, 959-85.
- Chen L, Wang L, Qiu XH, Yang XX, Qiao ZX, Yang YJ, Depression among Chinese University Students, Prevalence and Socio-Demographic Correlates. PLoS ONE, 8(3), 2013, e58379.
- Cramer H, Salisbury C, Conrad J, Eldred J, Araya R, Group cognitive behavioural therapy for women with depression, pilot and feasibility study for a randomised controlled trial using mixed methods, BMC Psychiatry. 11, 82, 2011.
- Cuijpers P, Sijbrandij M, Koole SL, Andersson G, Beekman AT, Reynolds CF, The efficacy of psychotherapy and pharmacotherapy in treating depressive and anxiety disorders, a meta-analysis of direct comparisons. World Psychiatry, 12(2), 2013, 137-48.
- Davey CG, Channen AM, Cotton SM, Hetrick SE, Kerr MJ, Berk M, The addition of fluoxetine to cognitive behavioural therapy for youth depression (YoDA-C), study protocol for a randomised control trial, Trials, 15, 2014, 425.

Dingle GA, Oei TP, Young RM, Mechanisms of change in negative thinking and urinary monoamines in depressed patients during acute treatment with group cognitive behavior therapy and antidepressant medication. *Psychiatry research*, 175(1-2), 2010, 82-8.

Falloon IR, Family interventions for mental disorders, efficacy and effectiveness. *World Psychiatry*, 2(1), 2003, 20-8.

Jafarpour N, Maleki SA, Asadi-Samani M, Khayatnouri MH, Najafi Gh, Evaluation of antidepressant-like effect of hydroalcoholic extract of *Passiflora incarnata* in animal models of depression in male mice. *J Herbmmed Pharmacol*, 3(1), 2014, 41- 45.

Katsuki F, Takeuchi H, Watanabe N, Shiraishi N, Maeda T, Kubota Y, Multifamily psychoeducation for improvement of mental health among relatives of patients with major depressive disorder lasting more than one year, study protocol for a randomized controlled trial. *Trials*. 15, 2014, 320.

Kirsch I, Antidepressants and the Placebo Effect. *Zeitschrift Fur Psychologie*, 222(3), 2014, 128-34.

Kooistra LC, Wiersma JE, Ruwaard J, van Oppen P, Smit F, Lokkerbol J, Blended vs. face-to-face cognitive behavioural treatment for major depression in specialized mental health care, study protocol of a randomized controlled cost-effectiveness trial. *BMC Psychiatry*, 14, 2014, 290.

Kumar K, Gupta M, Effectiveness of psycho-educational intervention in improving outcome of unipolar depression, results from a randomised clinical trial. *East Asian archives of psychiatry* , official journal of the Hong Kong College of Psychiatrists = *Dong Ya jing shen ke xue zhi* , *Xianggang jing shen ke yi xue yuan qi kan*, 25(1), 2015, 29-34.

Lam RW, Parikh SV, Ramasubb R, Michalak EE, Tam EM, Axler A, Effects of combined pharmacotherapy and psychotherapy for improving work functioning in major depressive disorder. *The British journal of psychiatry* , the journal of mental science, 203(5), 2013, 358-65.

Luciano M, Del Vecchio V, Giacco D, De Rosa C, Malangone C, Fiorillo A, A 'family affair'? The impact of family psychoeducational interventions on depression, *Expert review of neurotherapeutics*, 12(1), 2012, 83-91.

McMahon K, Herr NR, Zerubavel N, Hoertel N, Neacsiu AD. Psychotherapeutic Treatment of Bipolar Depression. *The Psychiatric clinics of North America*, 39(1), 2016, 35-56.

Miklowitz DJ, Family-focused treatment for children and adolescents with bipolar disorder, *The Israel journal of psychiatry and related sciences*, 49(2), 2012, 95-101.

Nakagawa A, Sado M, Mitsuda D, Fujisawa D, Kikuchi T, Abe T, Effectiveness of cognitive behavioural therapy augmentation in major depression treatment (ECAM study), study protocol for a randomised clinical trial. *BMJ Open*, 4(10), 2014, e006359.

Organization WH, Depression. Geneva, WHO, [updated October 2015, cited 2015 3 Nov], 2015.

Preventing Recurrent Depression, Long-Term Treatment for Major Depressive Disorder. Primary Care Companion to *The Journal of Clinical Psychiatry*, 9(3), 2007, 214-23.

Rabiei Z, Rafieian-kopaei M, Heidarian E, Saghaei E, Mokhtari S. Effects of zizyphus jujube extract on memory and learning impairment induced by bilateral electric lesions of the nucleus basalis of meynert in rat. *Neurochemical research*, 39(2), 2014, 353-60.

Saki K, Bahmani M, Rafieian-Kopaei M, The effect of most important medicinal plants on two important psychiatric disorders (anxiety and depression)-a review. *Asian Pac J Trop Med*, 7(1), 2014, 34-42.

Sarrafchi A, Bahmani M, Shirzad H, Rafieian-Kopaei M. Oxidative stress and Parkinson's disease, New hopes in treatment with herbal antioxidants. *Curr Pharm Des*, 22(2), 2016, 238 – 246.

Scogin F, Beutler L, Corbishley A, Hamblin D, Reliability and validity of the short form Beck Depression Inventory with older adults, *Journal of clinical psychology*, 44(6), 1988, 853-7.

Sharif F, Nourian K, Ashkani H, Zoladl M, The effect of psycho-educational intervention on the life quality of major depressive patients referred to hospitals affiliated to Shiraz University of Medical Sciences in Shiraz-Iran. *Iranian Journal of Nursing and Midwifery Research*, 17(6), 2012, 425-9.

Shimazu K, Shimodera S, Mino Y, Nishida A, Kamimura N, Sawada K, Family psychoeducation for major depression, randomised controlled trial, *The British journal of psychiatry*, the journal of mental science, 198(5), 2011, 385-90.

Shimodera S, Furukawa TA, Mino Y, Shimazu K, Nishida A, Inoue S. Cost-effectiveness of family psychoeducation to prevent relapse in major depression, Results from a randomized controlled trial. *BMC Psychiatry*. 2012,12,40.

Stegenga BT, King M, Grobbee DE, Torres-Gonzalez F, Svab I, Maaroos HI, Differential impact of risk factors for women and men on the risk of major depressive disorder. *Annals of epidemiology*, 22(6), 2012, 388-96.

Taylor RJ, Chae DH, Lincoln KD, Chatters LM. Extended Family and Friendship Support Networks are both Protective and Risk Factors for Major Depressive Disorder, and Depressive Symptoms Among African Americans and Black Caribbeans. *The Journal of nervous and mental disease*, 203(2), 2015, 132-40.

The Effects of Cognitive Behavioral Therapy as an Anti-Depressive Treatment is Falling, A Meta-Analysis, Correction to Johnsen and Friborg (2015). *Psychological bulletin*. 142(3), 2016, 290.

Tursi MF, Baes C, Camacho FR, Tofoli SM, Juruena MF, Effectiveness of psychoeducation for depression, a systematic review, *The Australian and New Zealand journal of psychiatry*, 47(11), 2013, 1019-31.

Weightman MJ, Air TM, Baune BT, A Review of the Role of Social Cognition in Major Depressive Disorder. *Frontiers in Psychiatry*, 5, 2014, 179.